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Subject: Limited Hazardous Materials Survey and Lead Paint Assessment Reports
Summary Letter Report, Recommendations and Cost Estimates

BACKGROUND

The General Services Administration (GSA) is planning an exterior paint stabilization project at seven GSA Warehouses located at 400 - 15th Street SW, Auburn, Washington. EHS-International, Inc. (EHSI) was tasked by GSA to conduct a limited hazardous materials survey of the exterior of the GSA Warehouses that will be impacted by the project. The intent of the survey is to specifically identify lead-containing paint (LCP) as well as asbestos-containing material (ACM) that are expected to be impacted by the planned lead paint remediation project.

The seven Warehouses are mid-1940s buildings with cement masonry unit exterior/wood framed walls and wood framed roof structure on an elevated concrete slab. Most of the interior is visible open space typical of a warehouse. There are enclosed office spaces in the buildings that appear to have been added after the original construction. In addition, there are newer connecting buildings that bridge the original gaps between Warehouses. There are a number of small sprinkler riser rooms adjacent to the exterior walls on all Warehouse loading docks. The Warehouse windows are wood and metal framed and have window glazing compound. There are suspended sprinkler pipes present throughout the covered loading dock areas. Roof and inaccessible components of the building were not included in the scope of work.

During October 14th through October 20th, 2011, EHSI conducted a limited hazardous materials survey (LCP and ACM) at the subject buildings in accordance with the above tasking. Seven separate survey reports are attached to this summary letter. EHSI inspected all exterior materials potentially impacted by the proposed project. Accessible suspect materials were sampled including, but not limited to, exterior wall systems, awning systems, mechanical systems, and windows.

MATERIALS FOUND

Lead: XRF Analysis indicates that all of the Warehouses have LCP on a majority of the exterior surfaces. Numerous exterior painted surface areas on the Warehouses show

evidence of peeling and chipping with lead containing paint chips present on the loading docks, walkways and ground surfaces.

ACM: Lab results indicate that ACM Transite siding and ACM hard beige window glazing putty are present on the exterior of the Warehouses and may be impacted by any painting projects.

REGULATORY REQUIREMENTS

Current workers and the general public who visit the GSA Warehouses may potentially become exposed to lead containing materials. In addition, a probable scope of work for the lead paint stabilization at the GSA Warehouses may include the removal and proper disposal of lead paint from all surfaces per project specifications and the removal and proper disposal of all visible paint chips on the ground, loading docks, sidewalks and perimeter surfaces within fifteen (15) feet of each wall, overhang and/or window. EHSI also recommends that all assumed asbestos containing materials (ACM) identified in the reports be removed and disposed if currently damaged and impacted as part of the lead paint remediation or be encapsulated to prevent further deterioration.

On June 24, 1993 Federal OSHA adopted a final standard on Lead for the Construction Industry (29 CFR 1926.62) to protect construction workers exposed to lead. The standard places the burden of performing an initial exposure assessment on workers among other items in which the employer (contractor) must do to remain in compliance. This regulation presents a significant impact to Contractors performing demolition, painting, welding and other personnel that may be subjected to lead exposure on a construction or remodeling project site.

In addition, the Washington State Department of Labor and Industries, Division of Occupational Safety and Health (DOSH) requires employers to conduct a hazard assessment and take appropriate worker protection precautions whenever building materials are disturbed that have detectable quantities of lead. Because the type of work planned is likely to disturb the lead containing materials; the contractor should perform an initial exposure assessment to determine if personal protective measures and work practices are required.

CONSIDERATIONS

There are several removal and encapsulation techniques. The following is a brief description of some of the common abatement techniques.

1) Demolition: Demolition (i.e. removal) of the entire lead-containing surface is generally the least expensive method if the surface does not need to be preserved. Typically demolition debris can be treated as solid waste.

2) Abrasive Removal: Include sanding, blasting, scrubbing, etc. Of these techniques, sandblasting is the most common remediation technique. Equipment should be equipped with a HEPA vacuum and work performed in an isolated area. This method is commonly used for removal on metal or concrete substrates. This method requires extensive engineering controls and personal protection equipment. Water pressure spraying with or without an abrasive additive is also commonly used but the filtering and disposal of the effluent must be considered in total costs.

3) Encapsulation: This method can be used to cover painted surfaces by painting or rolling an encapsulant that then forms a surface coating.

4) Chemical Stripping: Chemicals can be used to peel and remove LCP. Using chemicals often requires the use of toxic substances. This method is effective on metal and wood surfaces and sometimes necessary to preserve certain surfaces such as historical landmarks, windows, moldings, etc.

5) Replacement: Removal of the entire assembly is usually the easiest and sometimes least expensive remedial method. This method is generally used for wood trim, windows, etc. It is also possible using this method to sometimes dispose of the material as general construction debris.

DISPOSAL

The basic federal law governing hazardous waste disposal is the Resource Conservation and Recovery Act (RCRA) of 1976. RCRA governs federal hazardous waste and defines hazardous waste and hazardous waste generators. It provides information on required procedures to be followed before, during, and after disposal.

Lead is considered a hazardous material and therefore falls under RCRA. Lead-based paint abatement projects can produce potentially large quantities of solid or hazardous waste. Building components, sludges from paint stripping, lead paint chips and dust, waste water from cleanup, used protective clothing and filters, plastic sheeting used for containment and other items contaminated during the lead abatement process may be classified as hazardous waste.

It is important to properly determine what is hazardous waste. A Toxicity Characteristic Leachate Procedure (TCLP) sample of representative waste material could determine if lead or other materials will be classified as hazardous and be disposed of as such. Current EPA standards for classifying lead waste as hazardous are TCLP samples greater than 5 parts per million (ppm).

CONCLUSIONS and RECOMMONDATIONS

Based on observations and a paint condition assessment by EHSI Lead Based Paint Risk Assessors and after several thorough site walkthroughs with a commercial painting company, EHS prioritized the Auburn GSA Warehouses in the following order for a paint stabilization project.

<u>Highest Priority (Warehouse #4 and #6)</u>

Peeling paint (80%) on roof deck over loading docks as well as wood siding (35%-40%). Loose paint chip along the walls of loading dock areas (concern, heavy forklift traffic going in and out of the warehouses and use of the area by workers during smoke break). Cracked paint both on sliding warehouse doors and windows. (80%)

High Priority (Warehouses #3, #5 and #8)

Peeling paint (25%-30%) on roof deck over loading docks as well as wood siding (10%-25%) on one side, peeling paint (80%) on roof deck over loading dock as well as wood siding (35%-40%) on the other. Some loose paint chips along the wall on West sides.

WH #8 (concern severely damaged paint on West side of the warehouses on large door frames caused by forklift collisions at entry ways). The East front of Warehouse #5 is in good condition

Lowest Priority (Warehouse #1 and WH #2)

A few areas with cracked paint both on siding and roof deck. Warehouse #1 has more components with LCP and has more of them in poor condition (e.g. the lifts to the loading dock on Warehouse #1 show damage whereas Warehouse #2 doesn't). The loading docks themselves on both #1 and #2, including the roof deck over the loading dock, door, and windows, have similar components and conditions all with few areas with cracked paint.

PAINT STABILIZATION, CLEANUP AND REPAINTING COST ESTIMATES

Based on assumptions of current market value, EHSI has estimated costs to perform and provide labor, materials, equipment and supervision for the GSA Warehouses lead paint stabilization, cleanup and repainting including minor asbestos abatement of Transite siding and window putty where required. These estimates are listed below in order of priority:

Highest Priority

Warehouse #4	Lead Stabilization and Cleanup	$124,000
	One coat Paint	$ 40,500
		$164,500
Warehouse #6	Lead Stabilization and Cleanup	$122,000
	One coat Paint	$ 40,500
		$162,500

High Priority

Warehouse #3	Lead Stabilization and Cleanup	$114,000
	One coat Paint	$ 38,000
		$152,000
Warehouse #5	Lead Stabilization and Cleanup	$ 87,000
	One coat Paint	$ 36,000
		$123,000

Lowest Priority

Warehouse #8	Lead Stabilization and Cleanup	$118,000
	One coat Paint	$ 41,000
		$159,000

Warehouse #1	Lead Stabilization and Cleanup	$104,000
	One coat Paint	$ 34,000
		$138,000
Warehouse #2	Lead Stabilization and Cleanup	$139,000
	One coat Paint	$ 48,000
		$187,000

Cost Estimate Assumptions and Conditions:

- Price includes one mobilization. Cost for partial project remobilization is approximately $18,500.
- Assumes fresh water supply to be provided by GSA. Water use will be approx. 2,500 gallons per day for pressure washing of each structure.
- Wash water will be collected during washing activities in Baker Tanks.
- Assumes wash water will be filtered by contractor and rendered nonhazardous then released after testing into storm or sewer system on site.
- Assumes separated collected paint chips will be hazardous and disposed of appropriately.
- Assumes the use of Zinsser PEEL BOND being applied to all prepared surfaces to stop LBP from continuing to degrade and flake off from structure surfaces.
- Assumes preparation and protection coating of exterior piping.
- Assumes each building will be available without hindrance to production crews.
- Bond if required, would be an additional 2-3 %
- The cost estimates do not include design services, 3rd party oversight/construction administration or State sales tax. EHSI recommends adding an additional 20 to 25% for design, oversight and taxes.
- Contractor should be able to show experience with similar work and conditions.
- Contractor should be able to describe a work plan and management plan to contain, store and transfer large amounts of water and be able to separate paint chips quickly to reduce chance of leaching.
- Contractor should be able to create and maintain an aggressive and accurate production schedule that meets the needs and requirements of the owner. Contractor should be able to provide proof of lead paint qualifications as a company and have lead trained workers on staff and available for one or more buildings.

Interim Controls

In areas where there is a significant level of peeling paint and/or paint debris on the horizontal surfaces, interim controls should put implemented to minimize exposure to the building occupants, maintenance staff, and visitors. These interim controls include:

- Hazard communication to building tenants, occupants, janitorial, and maintenance staff to warn of the presence of the lead paint hazard.
- Proper cleanup and disposal of the visible lead paint chips including HEPA vacuuming of the general areas where the lead paint debris is found.
- Installation of sticky floor mats at doorways leading from areas found to have high levels of lead-in-dust to common areas such as offices, break rooms, and lunch rooms that typically do not have high dust levels. Sticky floor mats are used to help trap dust and other impurities in locations that require stringent dust and dirt control.

Project Limitations

The conclusions presented in report are professional opinions based upon our observations and testing at the project site. This report is intended exclusively for the purpose outline herein and at the site location and project indicated. This report is for the sole use of our client US General Services Administration. Opinions and conclusions presented herein apply to site conditions existing at the time of execution of our Limited hazardous Materials Survey and Lead Based paint Assessment and do not necessarily apply to future changes or other prior conditions at the site of which EHSI is not aware and has not had the opportunity to evaluate. The scope of services performed in execution of this Survey and Assessment may not be appropriate to satisfy the needs of other users, and any use or re-use of the document or the findings, conclusions, or recommendations presented is at the sole risk of said user.

EHSI's objective is to perform our work with care, exercising the customary thoroughness and competence of environmental consulting professionals in the relevant disciplines. Furthermore, we carried out our services in accordance with the standard for professional services by a consulting firm at the time those services were rendered. No expressed or implied representation or warranty is included or intended in our report except that our work was performed within the limits prescribed by our client, and with the customary thoroughness and competence of our profession.

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